Vision Paper
Climate Change and Western Water R&D Group (CCAWWG)

***Reality**: The ability to manage the nation's water supply as climate changes will be highly dependent on research efforts supporting the development of information on the combined impacts of shorter term variability and projected changes.*

Objective 1: Define an R&D Roadmap for Climate Integration into Western Water Management

Realities and considerations in developing the R&D Roadmap

1. Reclamation is the largest, but not the only water manager in the West. Consulting and collaborating with other Western water managers strengthens the understanding of the challenges facing the Western water management community, and the associated definition of research needs.

    - The first stage in developing the R&D Roadmap will focus on framing R&D needs around Reclamation's water management mission and the integration of climate change information. Consultation will initially focus on the *Interagency CCAWWG* and Reclamation water managers. However, it is expected that the first phase Roadmap will be a good approximation of the broader needs of the Western water management community.

    - The second stage of developing the R&D Roadmap will focus on structured consultation and collaboration with the community of state and local water management entities that have a common stake in Western water and climate change integration. It is expected that the second stage will lead to a more robust version of the R&D Roadmap, and a collaborative understanding of the R&D that is needed to support effective Western water management planning and decisions in the face of a changing and variable climate.

2. Climate change issues that influence Reclamation's water supply, water demands, and flood control responsibilities span the entire hydrologic cycle…and are therefore beyond Reclamation's core mission, expertise, and financial resources.

3. The agencies with the expertise, mission, and resources to conduct the R&D that span the hydrologic cycle need to participate in developing the R&D Roadmap…and must understand, embrace, and have a sense of ownership in the roadmap.

4. The R&D Roadmap should be understood, embraced, and owned by Reclamation's water operations, environmental compliance, and technical community. This will ensure relevancy and use of research results.

5. The R&D Roadmap should be communicated across Reclamation's management ranks, and other Western water managers and stakeholders in manner that is understandable and clearly speaks to their concerns and perspectives.

6. As a federal collaborative involving recognized R&D expertise and Reclamation, as the largest Western water management entity, the *Interagency CCAWWG* is in a position to lead.

7. Ultimately; states, municipalities, and other federal and non-federal organizations with a role and stake in Western water will likely use our results and bring their interest and capabilities to the to help shape and implement the R&D Roadmap.

Objective 2: Implementing the R&D Roadmap for Climate Integration into Western Water Management

Realities and considerations in implementing the R&D Roadmap

1. Using the R&D Roadmap as a guide, Reclamation will prioritize, select, conduct or contract for research that best aligns with Reclamation's mission, priorities, and available funding.

2. Reclamation's financial investments in implementing the roadmap will be consistent with Reclamation's authorities and priorities, but wherever possible Reclamation will seek and welcome collaboration and cost share with those who have a common interest and priorities.

3. Using the R&D roadmap as a guide, the participating agencies of the *Interagency CCAWWG* can select, conduct, or contract for research that best aligns with their mission, priorities, and available funding.

4. If the roadmap is based on input from the participating agencies of *Interagency CCAWWG* , the roadmap can be used as a budget justification and budget formulation tool for participating agencies

5. The *Interagency CCAWWG* will identify the research that cannot be conducted with the resources and capabilities of the workgroup participating agencies and pursue options to get those needs addressed. Options include internal reprogramming, collaborating, or brokering research needs to others such as NOAA RISA Centers, WRRI, NSF, NCAR, other federal agencies, state agencies, etc.

6. Because climate change and water is an international national priority, the scientific community and water community wants to be engaged and relevant. Increased funding for water and climate change R&D integration is expected to emerge in the coming years from a variety of federal and non-federal sources. Many of these sources will likely welcome an expert, relevant, objective R&D Roadmap to guide their investments.

7. The *Interagency CCAWWG* will provide a forum for monitoring, coordinating, and synthesizing research progress and coalesce results into useable information and applications.

8. Since research results are not useful unless they are applied, the *Interagency CCAWWG* will establish effective methods to engage the water management community and other end-users throughout the research process. Ongoing engagement should help ensure customer satisfaction and efficient transfer of research results into mainstream applications.